ECG Diagnosis: Flecainide Toxicity

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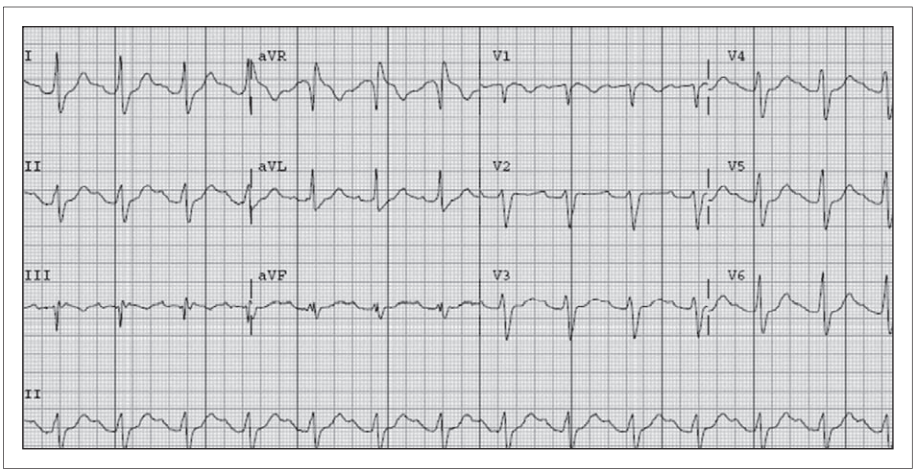

Figure 1. 12-lead Electrocardiogram from a 46-year-old woman with flecainide toxicity.

Demonstrates prolonged PR and QTc intervals with widened QRS complexes, right bundle branch block, and left posterior fascicular block patterns (flecainide level 2.0 µg/mL; normal range 0.20-1.0 µg/mL).

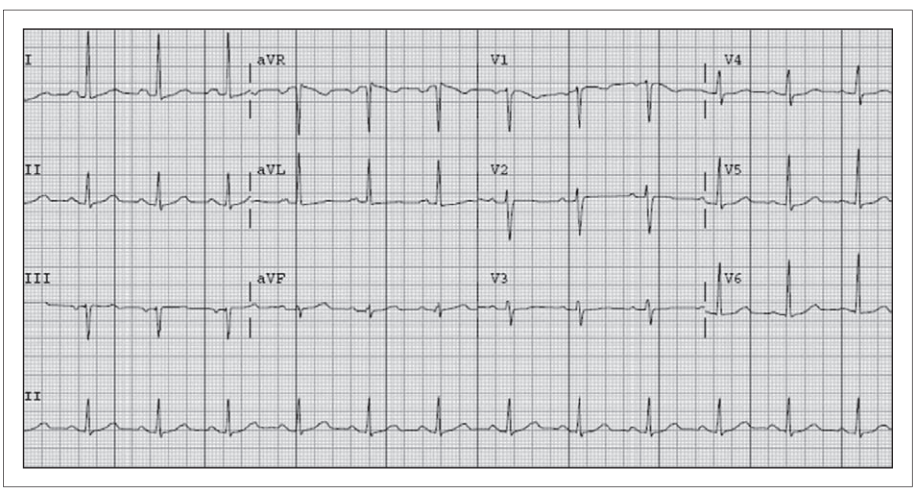

Figure 2. 12-lead Electrocardiogram from same patient obtained 24 hours later.

Demonstrates a normal sinus rhythm with resolution of the prolonged PR and QTc intervals, and narrowing of the QRS complexes (flecainide dose held for 24 hours).

Flecainide acetate is a Vaughn-Williams class IC antiarrhythmic and a sodium channel blocking agent used mainly for the treatment of supraventricular dysrhythmias.[1] Adverse cardiac effects include moderate negative inotropic action and depression of all major conduction pathways.[2] With increasing concentration, flecainide's action on conduction pathways is manifested on electrocardiogram as an increased PR interval and QRS duration. Toxicity is suggested when a 50% increase in QRS duration (0.18 sec) or 30% prolongation in PR interval (0.26 sec) occurs. The QTc interval can also be prolonged in cases of flecainide overdose.[3] Treatment of acute flecainide overdose includes administration of activated charcoal (for patient presenting early in course of ingestion), administration of sodium bicarbonate (reverses action of sodium channel blockade), pressors (eg, dobutamine) for profound hypotension, and transthoracic or transvenous pacing.[1,4] ❖

References

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